

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ON SEMICONDUCTOR CORPORATION
and SEMICONDUCTOR COMPONENTS
INDUSTRIES, LLC,

Plaintiffs,

V.

POWER INTEGRATIONS, INC.,

Defendant.

C.A. No. 17-247-LPS

**REDACTED -
PUBLIC VERSION**

**REPLY BRIEF IN SUPPORT OF POWER INTEGRATIONS, INC.'S
MOTIONS FOR SUMMARY JUDGMENT**

OF COUNSEL:

Douglas E. McCann

Joseph B. Warden

Warren K. Mabey, Jr.

FISH & RICHARDSON P.C.

222 Delaware Ave, 17th Floor

Wilmington, DE 19801

(302) 652-5070

Frank E. Scherkenbach

FISH & RICHARDSON P.C.

One Marina Park Drive

Boston, MA 02210

(617) 521-7883

Michael R. Headley

Howard G. Pollack

Neil A. Warren

FISH & RICHARDSON P.C.

500 Arguello Drive

Redwood City, CA 94063

(650) 839-5007

John W. Shaw (No. 3362)

Andrew E. Russell (No. 5382)

Jeff Castellano (No. 4837)

SHAW KELLER LLP

I.M. Pei Building

1105 North Market Street, 12th Floor

Wilmington, DE 19801

(302) 298-0700

jshaw@shawkeller.com

arussell@shawkeller.com

jcastellano@shawkeller.com

Attorneys for Defendant

John W. Thornburgh
FISH & RICHARDSON P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-4312

Sabrina Wilson
FISH & RICHARDSON P.C.
1180 Peachtree Street NE
21st Floor
Atlanta, GA 30309
(404) 879-7209

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TABLE OF CONTENTS

TABLE OF AUTHORITIES	ii
TABLE OF ABBREVIATIONS	iv
PRELIMINARY STATEMENT	1
MOTIONS FOR SUMMARY JUDGMENT DIRECTED TO ON’S ’211 PATENT	2
I. SHIMIZU ’752 ANTICIPATES ALL ELEMENTS OF CLAIMS 1 AND 9	2
II. THE ’211 PATENT’S HEAT DISSIPATION TECHNOLOGY IS OBVIOUS.....	4
A. The Record Contains Strong, Undisputed Evidence That a Skilled Artisan Would Have Combined Hoshino’s Known Heat Dissipation Techniques with the ’211 Patent’s Conventional Semiconductor Device	4
B. PI Disclosed This Obviousness Combination in Fact Discovery	7
III. ON FAILED TO PROVE THAT THE ACCUSED eSOP PRODUCTS INFRINGE.....	8
IV. ON ADMITS IT IS NOT ASSERTING INFRINGEMENT UNDER DoE.....	10
MOTION FOR SUMMARY JUDGMENT ON PRIVACY AND ISSUE PRECLUSION.....	10
A. ON Is Precluded Just As Fairchild Would Be Regarding the ’851 Patent	10
B. ON’s Noninfringement Defense for the ’851 Patent Is Also Precluded....	13
MOTIONS FOR SUMMARY JUDGMENT DIRECTED TO ON’S SR PATENTS	15
I. THERE CAN BE NO INFRINGEMENT OF ON’S “SR PATENTS” WHEN THE ACCUSED PRODUCTS ARE NOT USED WITH AN EXTERNAL “SR FET”	15
II. NO INFRINGEMENT OF THE SR PATENTS BASED ON CLAIM CONSTRUCTIONS THAT PI WON.....	16
A. The Court’s Construction of “Magnetized Voltage” Results in No Infringement of the ’298 and ’705 Patents	16
B. The Court’s Construction of “Polarity” Results in No Infringement of the ’407 Patent	18
III. NO PRE-SUIT DAMAGES	19
MOTION FOR SUMMARY JUDGMENT ON PRE-KNOWLEDGE INFRINGEMENT.....	19
MOTION FOR SUMMARY JUDGMENT THAT ON CORP. LACKS STANDING	20
CONCLUSION.....	20

TABLE OF AUTHORITIES

<u>Cases</u>	<u>Page(s)</u>
<i>Acumed LLC v. Stryker Corp.</i> , 525 F.3d 1319 (Fed. Cir. 2008).....	13
<i>Brunswick Corp. v. Chrysler Corp.</i> , 408 F.2d 335 (7th Cir. 1969)	10, 11
<i>Catalina Mktg. Int’l v. Coolsavings.com, Inc.</i> , 289 F.3d 801 (Fed. Cir. 2002).....	3
<i>Commil USA, LLC v. Cisco Sys.</i> , 135 S. Ct. 1920 (2015).....	12
<i>Crossroads Sys. (Texas), Inc. v. Dot Hill Sys. Corp.</i> , No. A-03-CA-754-SS, 2006 WL 1544621 (W.D. Tex. May 31, 2006)	10, 11, 12
<i>Dynacore Holdings Corp. v. U.S. Philips Corp.</i> , 363 F.3d 1263 (Fed. Cir. 2004).....	3
<i>El v. SEPTA</i> , 579 F.3d 232 (3d Cir. 2007).....	19
<i>Epistar Corp. v. Int’l Trade Comm’n</i> , 566 F.3d 1321 (Fed. Cir. 2009).....	13
<i>Fairchild Semiconductor Corp. v. Power Integrations, Inc.</i> , 2015 U.S. Dist. LEXIS 53327 (D. Del. April 23, 2015).....	13
<i>In re Johnson</i> , 34 C.C.P.A. 1175 (C.C.P.A. 1947)	4
<i>In re Omeprazole Patent Litig. v. Apotex Corp.</i> , 536 F.3d 1361 (Fed. Cir. 2008).....	12
<i>Int’l Nutrition Co. v. Horphag Research, Ltd.</i> , 220 F.3d 1325 (Fed. Cir. 2000).....	13
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	5, 6
<i>Move, Inc. v. Real Estate All., Ltd.</i> , 721 F. App’x 950 (Fed. Cir. 2018)	3, 17
<i>Pandrol USA, LP v. Airboss R. Prods., Inc.</i> , 320 F. 3d 1354 (Fed. Cir. 2003).....	12, 20

<i>Para-Ordnance Mfg. v. SGS Imps. Int’l, Inc.</i> , 73 F.3d 1085 (Fed. Cir. 1995).....	7
<i>Pernix Ir. Pain DAC v. Alvogen Malta Operations, Ltd.</i> , C.A. No. 16-139-WCB, 2018 U.S. Dist. LEXIS 81419 (D. Del. May 15, 2018).....	9
<i>Podobnik v. United States Postal Serv.</i> , 409 F.3d 584 (3d Cir. 2005).....	17
<i>Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.</i> , 843 F.3d 1315 (Fed. Cir. 2016).....	4
<i>See In re Mullin</i> , 481 F.2d 1333 (C.C.P.A. 1973)	3
<i>Stamps.com Inc. v. Endicia, Inc.</i> , 437 F. App’x 897 (Fed. Cir. 2011)	3
<i>Upsher-Smith Labs. v. PamLab, L.L.C.</i> , 412 F.3d 1319 (Fed. Cir. 2005).....	4
<i>Wyers v. Master Lock Co.</i> , 616 F.3d 1231 (Fed. Cir. 2010).....	6, 7

TABLE OF ABBREVIATIONS

Abbreviation	Abbreviated Phrase
ON	ON Semiconductor Corporation and Semiconductor Components Industries, LLC
ON Corp.	ON Semiconductor Corporation
PI	Power Integrations, Inc.
SCI	Semiconductor Components Industries, LLC
The '211 patent	U.S. Patent No. 7,102,211
The '851 patent	U.S. Patent No. 6,107,851
The SR patents	U.S. Patent Nos. 7,440,298, 7,564,705, and 7,796,407
UDF	PI's Undisputed Fact (set forth in D.I. 245)

PRELIMINARY STATEMENT

None of ON's procedural complaints are accurate.

With regard to Shimizu '752 anticipating the '211 patent, ON ignores PI's Undisputed Fact #3, which described in narrative form how each claim element was met, and cited the claim charts (and narrative analysis) of its expert—as partially illustrated below (A472):

All references unless noted will be to **Shimizu '752**, Exhibit 21.

Claim Element	Exemplary Disclosure in Prior Art
[1] A semiconductor device including:	"An object of the present invention is to improve heat conduction properties from tabs to heat dissipating fins by integrating the heat dissipating fins with the tabs that support the pellets, and to provide a lead frame for a semiconductor device that manifests high-output functionality in spite of being a small multi-pin IC"

ON only contested one claim element as not anticipated in discovery and its expert reports; ON's suggestion that PI must spend pages reciting every claim element is wrong, and is only an attempt to distract the Court and cloud the issue.

ON's other theories are equally wrong:

- Regarding Shimizu '752 anticipating the '211 patent, ON's contrived argument ignores its *own* expert's admissions about the meaning of "common electrical potential." (*Infra*, 2-3.)
- Regarding obviousness of the '211 patent, ON incorrectly claims that PI's combination is new by ignoring undisputed evidence. During fact and expert discovery, PI disclosed strong, undisputed evidence that a skilled artisan would have combined Hoshino's known heat dissipation techniques with the '211 patent's conventional semiconductor. (*Infra*, 7-8.) Moreover, PI never asserted the combination of the Hoshino reference and the admitted prior art before the PTAB, and the PTAB did not consider it. (B8.)
- Regarding non-infringement by the eSOP products, ON attempts to manufacture a claim construction dispute and improperly relies on new expert opinions. (*Infra*, 8-10.)
- Regarding privity, ON would make validity depend upon the products accused of infringement, which is contrary to law. (*Infra*, 10-15.)
- Regarding the SR patents, ON contradicts the Court's claim construction and relies upon bare attorney argument and opinions of its expert that have no evidentiary foundation. (*Infra*, 15-19.)
- Regarding pre-knowledge infringement, ON attempts to reverse the burden of proof, claiming PI has no admissible evidence that PI *did not* have pre-suit knowledge, while it is *ON's* burden to identify admissible facts about earlier PI knowledge. (*Infra*, 19-20.)
- Last, ON raises no evidence to bar judgment that ON Corp. lacks standing. (*Infra*, 20.)

MOTIONS FOR SUMMARY JUDGMENT DIRECTED TO ON'S '211 PATENT

I. SHIMIZU '752 ANTICIPATES ALL ELEMENTS OF CLAIMS 1 AND 9.

ON first claims that PI failed to compare Shimizu '752 to the claim language. But PI described how every claim element is met, and supported its UDF #3-5 with cites to a claim chart (A472-491) and 30 paragraphs of narrative discussion (A447-452) from PI's expert. These materials identify precisely where each claim limitation is present, and ON cites nothing to suggest a successful motion for summary judgment of anticipation requires more. ON, moreover, did not dispute that Shimizu '752 discloses every claim element except those requiring "common leads" and a "coupling portion." (PI UDF #3-5.) And as to "common leads," ON did not dispute that Shimizu '752 discloses multiple "leads"¹ coupled to the island. (PI UDF #4, 6, 11.)

ON then spends nearly two pages faulting PI for referring to a hypothetical illustration used at the deposition of ON's expert, but PI did not cite the hypothetical to avoid its proofs. Rather, ON's expert freely admitted the hypothetical structure disclosed the "common leads" and "coupling portion" of claims 1 and 9 (PI UDF #7), thus illustrating why a structure like Shimizu '752 discloses the claimed common leads.

ON's second argument asserts that ON's expert identified three missing claim limitations, but these are not three different arguments in ON's expert report (A509, ¶¶ 53-55): each limitation shares the same allegedly missing feature (*i.e.*, that the coupled leads supposedly lack a common electrical potential because those leads have "no electrical function or electrical potential"). ON (in its brief) and its expert (in his reports) then make no attempt to explain why having "no electrical function or electrical potential" causes Shimizu '752 to fall outside the scope of '211 patent claim 1. Both simply make the statement and say nothing more. But this conclusory, unexplained statement

¹ ON calls these leads "fins" but does not dispute that Shimizu '752 refers to them as "outer leads." (PI UDF #4.) ON's expert likewise refers to them as "external leads." (D.I. 265 Ex. 3, ¶ 11.)

does not explain how or why Shimizu '752's coupled, common leads lack a "common electrical potential"—a different requirement than electrical function.² In fact, the common leads in Shimizu '752 (element 9' in Figures 1 and 2a) are, in the words of ON's expert, "at all points connected to island" such that they "would have a common electrical potential." (PI UDF #9; *see also id.* (when leads "connect to the same thing" that is "why they are a common lead").)

Neither ON's brief nor its supplemental expert declaration takes issue with these admissions or explains why the admissions (with which PI's expert concurs (PI UDF #10)) do not encompass Shimizu '752's coupled, common leads. At most, ON asserts there is a factual dispute about the "purpose and use" of these leads in Shimizu '752, but the '211 patent claims do not speak to the purpose or use of the common leads; the claims require only common leads with a common electrical potential. *See Catalina Mktg. Int'l v. Coolsavings.com, Inc.*, 289 F.3d 801, 809-10 (Fed. Cir. 2002) (vacating summary judgment of non-infringement because the claims were not limited to a particular "use or purpose" stated in a preamble, and noting that "the patentability of apparatus . . . claims depends on the claimed structure, not on the use or purpose of that structure").

ON then pivots to a new argument³ that the coupling portion in Figure 2a is trimmed off in what ON claims is "the final product" of Figure 2b. (D.I. 264 at 6-7; D.I. 265 Ex. 3, ¶ 11.) Nothing about Figure 2a suggests it is only an intermediate structure, but even if true, it is well-established that an intermediary structure anticipates just as effectively as a "final product." *See In re Mullin*, 481 F.2d 1333, 1336 (C.C.P.A. 1973) (affirming rejection of apparatus claims as anticipated by in-

² These statements mirror those the Federal Circuit has rejected as insufficient. *See, e.g., Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1278 (Fed. Cir. 2004) ("a conclusory opinion that nodes that receive a meaningless 'data prefix' signal stripped of message content actually 'hear' the communication, thereby meeting the 'equal peers' limitation" held insufficient); *see also Stamps.com Inc. v. Endicia, Inc.*, 437 F. App'x 897, 913, 914 n.6 (Fed. Cir. 2011) (giving examples); *Move, Inc. v. Real Estate All., Ltd.*, 721 F. App'x 950, 957 (Fed. Cir. 2018) (same).

³ ON did not raise this argument in any report or contentions (A233; A497, ¶ 3.e.iii-iv; A509, ¶¶ 51-56), and ON's expert did not claim the reference was "confus[ing]" in his report. (A509-513.)

intermediary structure, because “[i]t matters not one whit that it was intended to be . . . an intermediate structure”); *In re Johnson*, 34 C.C.P.A. 1175, 1180, 162 F.2d 924 (C.C.P.A. 1947) (rejecting claims as anticipated by intermediate product in prior art); *cf. Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 843 F.3d 1315, 1335-37 (Fed. Cir. 2016) (reversing verdict of no anticipation where prior art only sometimes anticipated).⁴ Thus, even if ON is correct, Shimizu ’752 anticipates.

II. THE ’211 PATENT’S HEAT DISSIPATION TECHNOLOGY IS OBVIOUS.⁵

A. The Record Contains Strong, Undisputed Evidence That a Skilled Artisan Would Have Combined Hoshino’s Known Heat Dissipation Techniques with the ’211 Patent’s Conventional Semiconductor Device

ON does not dispute that POSITAs knew the problems of heat dissipation in semiconductors, and that prior art inventors added metal between leads with a common electrical potential to address this problem. (PI UDF #1, 2, 6.) Indeed, ON’s expert agrees that “others were . . . trying to solve heat-transfer problems” and that “heat transfer is enhanced” by the prior art methods. (D.I. 265 Ex. 3, ¶ 12.) ON also does not dispute that Hoshino specifically improved heat dissipation by joining a plurality of adjacent external leads with a “bonding” or “connecting” part. (*Compare* PI UDF #3-4, with D.I. 265 Ex. 3, ¶ 13 (“At most, Hoshino bonds two leads together.”).)

Nor does ON dispute that the ’211 patent inventors joined a plurality of leads with a common electrical potential to improve heat dissipation (PI UDF #8), or that they described a prior art

⁴ Shimizu ’752 states that Figure 2a shows a finished package in “the mounting condition on a printed substrate 20,” “obtained by cutting away the dam tie-bars 7 and the tab leads 3 *as desired*.” (A112 (emphasis added), A114.) That it offers two options (coupling portion or not) is irrelevant. *See Upsher-Smith Labs. v. PamLab, L.L.C.*, 412 F.3d 1319, 1322 (Fed. Cir. 2005) (affirming anticipation summary judgment based on “optional inclusion” of claim element, even if the reference taught away from including it). ON relies on snippets of testimony from PI’s expert to allege the expert was “confused,” but omits his testimony that “[Figure] 2a obviously can’t be an intermediary step because it is assembled to the printed circuit board, and there’s no way to trim a dam bar off when it’s assembled in the printed circuit board.” (B23, 183:16-22, 184:3-7.)

⁵ While ON claims PI is “somewhat unclear” about the asserted combination, the specific combination asserted is set forth in PI’s brief (D.I. 245), motion (D.I. 244), and proposed order (*id.*).

“conventional semiconductor device” containing all features of the asserted claims except the “coupling portion.” (PI UDF #10, 11.) ON does assert PI’s description of ON’s expert testimony in PI’s UDF #13-14 is inaccurate, but identifies no inaccuracies. ON thus failed to meet its burden to come forward with facts to dispute that a POSITA would connect only leads with a common electrical potential to improve heat dissipation, instead of electrically independent leads. (PI UDF #13, 14.) ON also does not dispute the admitted prior art is itself a gull-wing lead frame or that Hoshino teaches locating a “connecting” or “bonding” part on the vertical portion of the leads, at their midpoint. (PI UDF #12.) Last, ON does not dispute that secondary considerations are inapplicable.

Under these undisputed facts, the claims of the ’211 patent are the result of applying an obvious solution to a well-known problem, just as in *KSR* and PI’s other cited cases (which ON does not discuss). ON does respond that the ’211 patent is focused on balancing heat dissipation with other concerns related to coupling common leads. (D.I. 264 at 11.) But the ’211 patent focuses exclusively on the problem of heat dissipation (A99, 1:49-61; A90, Abstract) and does not mention any of the concerns that ON raises, let alone “balance” them. The ’211 patent instead states “the presence of the coupling portions 30 ***causes no problem***[.]”⁶ (A100, 3:39-41 (emphasis added).)

Even if the ’211 patent had discussed these problems, the claims are still obvious. “Under the correct analysis, ***any*** need or problem known in the field of endeavor at the time of invention and addressed by the patent [here, improving heat dissipation] can provide a reason for combining” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007) (emphasis added). ON agrees that heat dissipation was a known problem addressed by the prior art (*see supra* at 4), and the purpose and structure of Hoshino’s “connecting” parts match the unclaimed purpose (improving heat dissipation)

⁶ Neither the ’211 patent nor Hoshino discuss ON’s expert’s allegedly problematic structures (*i.e.*, “wide leads which emerge from the resin sealing body” or “leads which merge into a single large lead at the foot”). (D.I. 265 Ex. 3, ¶ 12.)

and the claimed structure of the '211 patent's "coupling portion" in every relevant way. (*See* D.I. 245 at 12-13; PI UDF # 3, 7-8, 10-12.) Thus, a POSITA would be motivated to use Hoshino's known heat dissipation technique to improve the heat dissipation characteristics of the admitted prior art. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1243-45 (Fed. Cir. 2010) (POSITA would apply prior art external seals to prior art hitch-pin locks where contamination of the locking mechanism by debris was a known problem addressed by the claimed external seal).

ON next claims Hoshino does not teach connecting leads with a common electrical potential (as opposed to leads carrying different electrical signals). (D.I. 264 at 11.) But ON cites no *facts* to create a dispute over whether a POSITA knew that coupling leads carrying different electrical signals would be "dangerous" and render them "useless." (PI UDF #13, 14.) And even if Hoshino had joined discrete leads (rendering the device useless), it is error to assume a POSITA "attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem." *KSR*, 550 U.S. at 420. Examples abound in the prior art of using the Hoshino technique in various configurations, including in gull-wing products and with common leads. (*See* PI UDF #6.) Hoshino provides an "obvious example" of coupling leads to improve heat dissipation; "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton," and thus asserting that a POSITA would ignore Hoshino because it does not discuss common or discrete leads "makes little sense." *Id.* at 420-21.

ON then claims PI is "virtually silent" about whether Hoshino discloses "common leads projecting out" (D.I. 264 at 12-13.) Hoshino need not disclose this limitation, because common leads are disclosed in the admitted prior art as elements 4D, 4E, 4F, and 4G in Figure 8, which ON does not contest. (PI UDF #11; A8.) Hoshino in turn teaches the well-known technique for improving heat dissipation by joining two or more leads with a coupling or "connecting" part.

ON and its expert also assert that Hoshino does not disclose “common leads coupled to the island” or (with regard to claims 4, 9, and 10) a gull-wing structure. (D.I. 264 at 11-12, 13.) But again, Hoshino need not disclose these features because the admitted prior art lead frame contains every limitation other than the “coupling portion.”⁷ (PI UDF #10-11; A538, ¶ 131 (ON’s expert admitting “the invention of the ’211 patent is adding a coupling portion”).) The inventors started with a structure having all these features and used the technique taught by Hoshino to improve heat dissipation.⁸ *See Wyers*, 616 F.3d at 1245 (holding obvious claims directed to a hitch-pin lock having an external seal with the unclaimed purpose of “protect[ing the] lock’s locking head [*i.e.*, the locking mechanism] from the ingress of contaminants[,]” where the use of external seals in prior art locks was “known[,]common and widely used” for the same purpose)).⁹

B. PI Disclosed This Obviousness Combination in Fact Discovery

PI’s expert opined in his opening report that “all asserted claims” are rendered obvious by the combination of “[t]he admitted prior art and . . . one or more of the coupling portion references,” expressly including Hoshino. (A445-446.) He then analyzed the Hoshino combination (A467-470, ¶¶ 549-564), and addressed it again in his reply report. (A602-604, ¶¶ 279-284.) ON’s expert in turn rebutted this opinion. (A538, ¶ 132; *see also* A525, ¶¶ 113-114 (acknowledging Hoshino is a

⁷ ON also does not dispute that the prior art includes examples of using the Hoshino technique with gull-wing leads. (*See* PI UDF #6.)

⁸ In other words, a POSITA would apply Hoshino’s known heat dissipation technique to the admitted prior art lead frame (which admittedly discloses all claim limitations except a “coupling portion”), not the other way around. Indeed, ON does not dispute that applying Hoshino’s known heat management technique to the admitted prior art (which has a gull-wing shape), would result in a coupling portion “formed between a side surface of the resin-sealing body and the ends of the common leads” (claim 9), and “formed on a vertical portion of the gull-wing shape” (claim 10). (*See* D.I. 245 at 14-15; PI UDF #3, 12.) Thus, if claim 4 is obvious, so are claims 9 and 10.

⁹ For the same reason, ON’s cases about determining obviousness with regard to the invention “as a whole” are inapposite. (D.I. 264 at 10-11.) “To the extent [PI] focused on the claimed invention’s [“coupling portion”], it did no more than give appropriate attention to the feature of the invention that was central to the obviousness inquiry.” *Para-Ordnance Mfg. v. SGS Imps. Int’l, Inc.*, 73 F.3d 1085, 1088 (Fed. Cir. 1995) (affirming obviousness).

“coupling portion reference[.]”).) ON also addressed the admitted prior art, and its use in obviousness combinations, with PI’s expert at deposition. (B28, 282:12-284:3; *see also id.*, 284:8-285:18.)

Nor was this the first time PI identified this combination. In its January 11, 2019 final contentions, PI identified the admitted prior art semiconductor device, explained that it disclosed all elements of the asserted claims other than “coupling portion” (B12), asserted that “[c]oupling of common leads . . . was known in the art,” identified Hoshino as “disclos[ing] bonding the external leads . . . to ‘increas[e] heat diffusion’” (B13 (including Figures from Hoshino with coupling portions highlighted); *see also* B11-12 (stating the ’211 patent’s “coupling portion” was implemented to “aid in heat dissipation”)), and stated a POSITA “would have been motivated to combine existing semiconductors . . . with a coupling portion to improve heat dissipation,” and “would have been motivated to choose lead-based solutions.” (B14 (citing Hoshino); *see also* B18 (disclosing in supplemental contentions the combination of admitted prior art with the knowledge of a POSITA, previously defined as including the Hoshino heat-dissipating coupling portion (B13-14)).)

III. ON FAILED TO PROVE THAT THE ACCUSED eSOP PRODUCTS INFRINGE.

PI based its non-infringement motion on the position advanced by ON’s expert, confirmed in his deposition, that discrete leads are “extending near” a semiconductor as long as they are “near enough” to perform a “usable function.” (PI UDF #6-7.) ON does not dispute the material facts regarding its expert’s opinions,¹⁰ instead asserting PI has raised an untimely claim construction issue. But PI’s motion does not raise a claim construction dispute at all. Rather, PI brought this motion because ON’s expert should have applied the plain and ordinary meaning of “extending near the island” to the eSOP products, but did not. (*Id.*) Instead, he opined only that the ends of the

¹⁰ ON’s “disputed facts” highlight the weakness of its opposition. For example, “ON disagrees that Figure 1 illustrates the only possible embodiment”—a claim PI never made. (D.I. 264 at 14.) ON notes that “in Paragraph 15 of his report, Dr. Kohl used slightly different language” than PI’s quote from *paragraph 13*. (*Id.*) And ON accuses PI of “micharakteriz[ing]” its expert (*id.* at 15), but the cited portion of PI’s brief fully quotes the relevant sentence from ON’s expert. (D.I. 245 at 17-18.)

discrete leads are *near* the island, with no analysis of why or how they *extend* near the island. (D.I. 264 at 15-16; D.I. 245 at 17.)¹¹ In other words, ON’s expert simply equated “extending near” to “near.”¹² ON’s expert then advanced a different theory at deposition (suggested in his reply report and never before disclosed in discovery), claiming that any lead that is “near enough” to perform a “usable function for the semiconductor” meets the “extending near” limitation. (D.I. 245 at 17 (citing A26-27, 65:19-66:8).) The expert confirmed that his “usable function” test is divorced from any actual measurement of distance, as long as the lead is “able to be electrically or thermally or somehow connected to the semiconductor.” (A26, 64:2-20.)

Apparently recognizing this position has no support, ON’s expert offers a *third* opinion, drawing arbitrary lines and arrows on an eSOP lead frame over the course of seven paragraphs and seven pages—more material than his first two opinions combined. (*Compare* D.I. 265, Ex. 3 at 11-18, *with* A275-276, *and* A377-379.) This new, untested opinion simply comes too late to forestall entry of judgment. *See, e.g., Pernix Ir. Pain DAC v. Alvogen Malta Operations, Ltd.*, C.A. No. 16-139-WCB, 2018 U.S. Dist. LEXIS 81419, at *22 (D. Del. May 15, 2018) (striking late-disclosed infringement theory raised on summary judgment where prejudice “would be curable, if at all, only through the expenditure of time and resources by [defendant] that it should not have to bear at this point in the process”). Because ON agrees “that ‘extending’ in the context of the ’211 patent means, essentially, ‘stretching out in distance’” (D.I. 264 at 16), and because ON failed to present any

¹¹ Indeed, if anyone is making a new claim construction argument, it is ON and its expert. The inventors did not claim “the directionless term ‘near’”—they claimed discrete leads “extending near.” ON’s second claim construction argument—that “Figure 1 . . . contradicts PI’s attempt to read the eSOP leads out of the claim”—is nonsensical. (D.I. 264 at 17-18.) Figure 1 depicts a plurality of discrete leads extending near the island, as required by claim 1 of the ’211 patent.

¹² PI’s expert responded—and PI still contends—that the accused eSOP products do not meet the “extending near” limitation because there is an intervening structure between the leads and the island. (*See* D.I. 264 at 18.) Contrary to ON’s suggestion of abandonment, PI maintains this defense but did not advance it on summary judgment as it entails factual disputes for a jury.

timely evidence that the accused eSOP products meet the “extending near” limitation, the Court should grant summary judgment of non-infringement with respect to the accused eSOP products.

IV. ON ADMITS IT IS NOT ASSERTING INFRINGEMENT UNDER DoE.

ON concedes this motion, seeking only to assert DoE as part of its new theory on “extending near.” (D.I. 264 at 19.) As discussed above, that theory is too late and the Court should reject it.

MOTION FOR SUMMARY JUDGMENT ON PRIVITY AND ISSUE PRECLUSION

A. ON Is Precluded Just As Fairchild Would Be Regarding the ’851 Patent

ON is wrong that it never had its day in court, because ON is Fairchild. In addition, ON’s arguments against privity are based on misreading the applicable law and impermissibly making validity dependent upon which products are accused. PI addresses these arguments in detail below.

But first, PI recognizes that Judge Freeman of the Northern District of California rejected PI’s similar arguments regarding different patents, after PI filed the present motion. (*See* DI. 260-1, Ex. G at 23-35.)¹³ PI respectfully suggests that Judge Freeman erred, and asks this Court to reach a different result.¹⁴ Judge Freeman erred for two fundamental reasons. First, she relied on *Crossroads Sys. (Texas), Inc. v. Dot Hill Sys. Corp.*, No. A-03-CA-754-SS, 2006 WL 1544621 (W.D. Tex. May 31, 2006), and both she and the Western District of Texas misread the leading authority, *Brunswick Corp. v. Chrysler Corp.*, 408 F.2d 335 (7th Cir. 1969), which the Federal Circuit has repeatedly cited with approval. Second, as she acknowledges, her “holding may lead to the asserted patents being held valid against some ON products (those acquired from Fairchild) and invalid against other ON products (if the jury in this case finds the patents invalid).” (D.I. 260-1, Ex. G at 33.) This result is contrary to longstanding Supreme Court and Federal Circuit authority.

¹³ ON’s submission of Judge Freeman’s opinion (in D.I. 265-1, Ex. 24) is incomplete. PI submitted the entire opinion in the cite above.

¹⁴ ON does not argue that Judge Freeman’s ruling is binding, and there is no final judgment in California.

Crossroads begins by stating that the result in *Brunswick* “seems eminently fair and sets a good policy” because “[a] party should not be able to evade an adverse judgment on the issues of validity and infringement simply by transferring its assets.” 2006 WL 1544621 at *6. However, the Texas court (like Judge Freeman) purports to distinguish *Brunswick* because “[u]nlike the two suits at issue in *Brunswick*, the accused products here are not the same as the accused products in *Chaparral*.” *Id.* However, the decision in *Brunswick* was not based on whether the accused products in the current and previous cases were the same. Rather, *Brunswick* found defendant Chrysler precluded from challenging validity because it had purchased “the entire business” of the company that had previously challenged validity and lost. 408 F.2d at 338. Here, ON does not dispute that it succeeded to Fairchild’s entire business.

Moreover, the *Brunswick* court nowhere discusses whether the accused products in the two cases were the same—because this was not the basis of its decision—but there are strong indications that the accused products were different in the two cases. The products in the first case were found *infringing* and then *licensed*. 408 F.2d at 336. As such, if the same products were at issue in the second case, the parties would have been litigating whether issue preclusion required a finding of *infringement* (or license), not validity. In addition, the *Brunswick* court expressly interpreted the prior judgment to leave open infringement of *new products* but *not validity*: “In our view, the only reasonable interpretation of the decree is that the determinations as to patent validity and infringement were final adjudications, and that the third paragraph in view of the license granted, reserved for a new trial the issues of enforcement of the decree and of infringement by new models.” *Id.* at 338. *Crossroads* (like Judge Freeman) overlooks all of these facts.

In addition, both *Crossroads* and Judge Freeman conflate infringement and validity, which are separate issues. Whether the same or similar products are accused would be highly relevant to

issue preclusion for *infringement*, but accused products are irrelevant to validity. As the Supreme Court recently emphasized in *Commil USA, LLC v. Cisco Sys.*, “infringement and invalidity are separate matters under patent law.” 135 S. Ct. 1920 at 1928 (2015). Indeed, in *Commil*, the Supreme Court held that *beliefs* about invalidity are irrelevant to induced infringement despite the commonsense notion that “someone cannot be induced to infringe an invalid patent.” *Id.* at 1928-29. The Supreme Court explained that “the issues of infringement and validity appear in separate parts of the Patent Act” and that they “are distinct issues, bearing different burdens, different presumptions, and different evidence.” *Id.* The Federal Circuit has repeatedly held the same, including in the *Pandrol* case cited in *Commil*. See *Commil*, 135 S. Ct. at 1928, citing *Pandrol USA, LP v. Airboss R. Prods., Inc.*, 320 F. 3d 1354, 1365 (Fed. Cir. 2003) (“this court has long recognized that patent infringement and invalidity are separate and distinct issues”). Thus, for example, “[i]t is well established . . . that ‘practicing the prior art’ is not a defense to infringement” because that conflates the different burdens of proof required to prove infringement and invalidity. *In re Omeprazole Patent Litig. v. Apotex Corp.*, 536 F.3d 1361, 1377 (Fed. Cir. 2008). ON even relies upon this principle as the basis for one of its own motions for summary judgment.

ON’s focus on the accused products for privity conflates infringement and validity. The court in *Crossroads*, like Judge Freeman, even recognized that the rule of law that it adopted “created the possibility that the patent at issue might ultimately be adjudged both valid (with respect to the two products for which there was privity) and invalid (with respect to the remaining four products).” 2006 WL 1544621 at *7. However, as the Supreme Court held in *Commil*, validity and infringement are entirely separate. Validity may not depend on infringement.¹⁵

¹⁵ Judge Freeman states that PI cites no cases in which substantive law affects the scope of issue preclusion (D.I. 260-1, Ex. G at 33), but substantive law is necessarily involved since it defines the “issues” that are the subject of preclusion.

ON's fallback case citations are no better than *Crossroads. Int'l Nutrition Co. v. Horphag Research, Ltd.*, 220 F.3d 1325 (Fed. Cir. 2000) makes clear that the critical distinction is whether particular assets were transferred. *Id.* at 1329. However, *Int'l Nutrition Co.* was not an infringement action, so there were no "accused products," and the decision did not turn on which products were accused of infringement.

ON's reliance on *Epistar Corp. v. Int'l Trade Comm'n*, 566 F.3d 1321, 1333-34 (Fed. Cir. 2009) to suggest that a successor-in-interest can advance new defenses is also inapposite. *Epistar* did not deal with issue preclusion but instead turned on contractual interpretation and whether a contract barred new defenses. *Id.* at 1333. Such a contractual issue is not present in this case.

Therefore, since ON acquired the entire business of Fairchild, the Court should at a minimum grant summary judgment that ON is precluded from challenging the validity of the '851 patent, just as Fairchild would be. The accused products are irrelevant to this inquiry.¹⁶

B. ON's Noninfringement Defense for the '851 Patent Is Also Precluded

ON's noninfringement defense is also subject to issue preclusion because ON raises the same defense that Fairchild litigated and lost, and ON has not demonstrated that its accused products are different in material ways. First, ON does not disagree with PI's authority that preclusion applies to different products where there are no material differences between them. *E.g.*, *Acumed LLC v. Stryker Corp.*, 525 F.3d 1319, 1324 (Fed. Cir. 2008); *Fairchild Semiconductor Corp. v. Power Integrations, Inc.*, 2015 U.S. Dist. LEXIS 53327, at *5-6 (D. Del. April 23, 2015).

Second, ON cites no authority holding that a different rule applies when the products of a successor-in-interest are involved.¹⁷ It would be illogical for the same circuit to be both infringing and non-infringing based on who designed it. Thus, if ON's accused products are not materially

¹⁶ ON's opposition does not address issue preclusion for validity, except to argue privity.

¹⁷ PI did not move for summary judgment of issue preclusion on infringement in California.

different from Fairchild's, it may no more argue noninfringement on the same factual basis for "legacy-ON products" than it could for Fairchild products.

Third, ON's argument that its noninfringement defense is different from Fairchild's is mistaken. To begin, ON's discussion of different claims is irrelevant because the dispute is over the "oscillator" claim limitation, which is identical. ON next argues that PI allegedly identified two signals in Fairchild schematics (COSC as the oscillation signal and PULSE as the maximum duty cycle signal). (D.I. 264 at 25.) However, ON merely cites expert reports from *Fairchild II*, ignoring the actual evidence presented at trial, as discussed by the Court in its JMOL order and cited in PI's opening brief. The trial record shows that PI pointed to the same output of the oscillator as both the oscillation signal and the maximum duty cycle signal. (B102-103, 947:23-948:19 and B115 (Dr. Kelley using the datasheet block diagram to identify the oscillation signal as the one line out from the oscillator, with no mention of COSC or schematics); B103-104, 948:20-955:12 and B116-117 (Dr. Kelley using the same datasheet block diagram and explaining how the same output, PULSE, further provides the maximum duty cycle signal).) Indeed, PULSE was the only signal discussed for the Fairchild SG6842J. COSC was mentioned only as an alternative, maximum duty cycle signal, for the SG5841J product. As explained in PI's opening brief, PI relies upon [REDACTED] [REDACTED] for the present motion.

In addition, Fairchild's noninfringement defense was based on the testimony of Tom Yang, who said that because PULSE was a clock signal, it could not *also* be a maximum duty cycle signal. (B105-108, 1126:11-15; 1128:3-23; 1135:16-1136:10; *see also* B110, 1250:12-1251:21 (Wei); B112, 2408:19-2410:6 (closing).) In other words, Fairchild's argument was what the Court rejected in its JMOL order, which ON's revisionist history completely ignores. That order, quoted in PI's opening brief, is proof that the dispositive issue in *Fairchild II* was whether the one output could

qualify as the two signals recited in the claim.

ON relies upon the same defense in this case. Though ON discusses other alleged differences between its products and Fairchild's, it does not dispute the fact that [REDACTED]

[REDACTED], as demonstrated in PI's brief, and ON's attorney arguments about *other* differences in the schematics is simply misdirection.

Finally, ON's alternate noninfringement argument for only one of its accused products, the NCP1252, is tangential. Issue preclusion still applies to ON's "two signals" defense for that product. The Court should grant summary judgment of issue preclusion for infringement, leaving open only indirect infringement and ON's alternate defense solely for the NCP1252.

MOTIONS FOR SUMMARY JUDGMENT DIRECTED TO ON'S SR PATENTS

I. THERE CAN BE NO INFRINGEMENT OF ON'S "SR PATENTS" WHEN THE ACCUSED PRODUCTS ARE NOT USED WITH AN EXTERNAL "SR FET"

ON does not deny there can be no infringement unless the accused InnoSwitch chip products are used with an external SR FET. Therefore, PI's motion should be granted.

In addition, PI's motion is not hypothetical. ON does not dispute the documents teaching that PI's accused products can be used with a diode instead of an SR FET. PI is entitled to summary judgment that this is a noninfringing use. In addition, ON's cited case (*Matthews*) concerns the availability of declaratory judgment jurisdiction, not summary judgment.

ON also argues issues related to inducement, which is not the basis of PI's motion. PI does not assert there are no genuine disputes regarding indirect infringement at this time.

ON also misrepresents Mike Matthews' testimony. He testified that [REDACTED]

[REDACTED] (B120-121, 46:21-51:20.) In this testimony, Mr. Matthews

[REDACTED]

[REDACTED]

Indeed, it is not PI's burden to prove that customers do not use SR FETs—let alone with 100% certainty. It is ON's burden to prove that customers do use SR FETs, and in what numbers. Granting PI's motion will simplify trial by excluding noninfringing uses from the case.

II. NO INFRINGEMENT OF THE SR PATENTS BASED ON CLAIM CONSTRUCTIONS THAT PI WON

A. The Court's Construction of "Magnetized Voltage" Results in No Infringement of the '298 and '705 Patents

ON fails to explain how PI's accused products can create a control signal "in response to" something ("magnetized voltage") that does *not exist* at the time the control signal is allegedly created. The issue is not *when* the circuit responds to the magnetized voltage; it is *whether* it responds to *that voltage* at all. It is not possible to "respond" to something if it no longer exists, and ON admits "the Court's construction of 'magnetized voltage' recognizes that the magnetized voltage itself has a temporal bound." (D.I. 264 at 29-30.)

ON also does not dispute that [REDACTED]

[REDACTED]

[REDACTED]

Furthermore, ON does not dispute that this response happens after the magnetized voltage is no longer present.

The time for claim construction has passed, but ON's argument based on the patent specification is also wrong. The patent shows that the circuit uses the magnetized voltage during the magnetization period (*i.e.*, when it is present) to charge a capacitor; it uses the demagnetized voltage during the demagnetization period to discharge a capacitor; and this whole process generates the control signal. (*E.g.*, A1442, Fig. 4; A1444, Fig. 7; A1446-1447, 4:18-21, 4:46-5:2; *see also* B127-132, ¶¶ 103-111 (explaining the operation of the disclosed embodiment).) Thus, the specification

supports PI because the circuit responds to magnetized voltage and to demagnetized voltage, respectively, at times *when each exists*. ON cites nothing in the specification suggesting that the circuit can “respond to” a voltage that does not exist at the time of the alleged response.

ON's next argument—that PI's accused circuit “monitors” the magnetized voltage—is wrong, not supported by evidence, and untimely. [REDACTED]

Dr. Zane’s conclusory opinion, with no supporting evidence, cannot raise a genuine dispute of material fact. *Podobnik v. United States Postal Serv.*, 409 F.3d 584, 594 (3d Cir. 2005) (“a party must present more than just ‘bare assertions, conclusory allegations or suspicions’ to show the existence of a genuine issue”) (citation omitted); *Move, Inc. v. Real Estate All., Ltd.*, 721 F. App’x 950, 957 (Fed. Cir. 2018) (affirming summary judgment of invalidity where an “expert’s conclusory declaration . . . provides no citations to support [his] assertion and contains no additional rationale”).

ON also cites the testimony of PI's expert Mr. McAlexander

(D.I. 265-1, Ex. 15 at 291:21-294:8; Ex. 14 at ¶ 84), but that again proves PI's point. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The Court should grant PI's motion.

B. The Court's Construction of "Polarity" Results in No Infringement of the '407 Patent

ON accuses two signals, each lacking polarity, when the claim requires one signal with polarity. ON's fallback is to argue that a latch in the accused products "combines" the two signals, but that is not what a latch does. ON has no response to PI's evidence that a latch is simply not a combinatorial circuit, and ON has no evidence that the accused latch creates any "combined" signal. No such signal is shown in any document, and ON does not even identify the combined signal that it imagines might exist. All it has is the *ipse dixit* of Dr. Zane, but again conclusory expert opinions without supporting evidence are not enough to defeat summary judgment.

ON also relies upon unsupported attorney argument that the accused product is like the disclosed embodiment in the patent. This is wrong. ON points to Figure 4 but ignores that Figure 4 is just part of the relevant disclosure. The patent shows and explains that the two parts of the pulse signal shown in Figure 4 are *actually combined together* using comparators (not a latch), and it is *the combined signal* that is used to set and reset the latch. (A1484, 9:55-10:5; A1474, Fig. 13.) In other words, the S_P and S_N outputs of Figure 4 are not used independently and are thus nothing like the accused product, where the logic signals are never combined.

ON's alternative argument—that logic signals have polarity if one imagines a reference point between the logic levels—is the argument that ON made and that the Court rejected during claim construction. (See D.I. 110 at 10-11.) ON's argument would mean that any logic signal has polarity because it can be above or below an arbitrary midpoint. However, the Court rejected ON's proposed

construction of “a high or low state of the pulse signal(s).” (*See id.* at 10.)

Finally, ON’s DoE argument must be rejected for similar reasons. ON continues to rely upon an alleged “combination of logic signals” (D.I. 264 at 36) which does not exist and which ON has no evidence to support. Moreover, by accusing two independent logic signals, neither of which has polarity, ON’s DoE argument simply reads “polarity of the pulse signal” out of the claims. This is not permitted. PI’s motion should be granted.

III. NO PRE-SUIT DAMAGES

ON does not dispute that it is not entitled to pre-suit damages for the ’298 and ’705 patents, and the issue is not contingent or hypothetical, so PI’s motion should be granted. In addition, ON’s damages expert should not be permitted to opine on damages for all three SR patents together. That would create the risk that the Jury could be confused into awarding pre-suit damages for the ’298 and ’705 patents. Instead, ON’s damages expert should be limited to basing any pre-suit damages for the SR patents on the ’407 patent.

MOTION FOR SUMMARY JUDGMENT ON PRE-KNOWLEDGE INFRINGEMENT

ON, with the burden of proof, makes no argument that PI knew about the ’211 patent (which was first assigned to Sanyo, not System General (A90)) before December 27, 2016 (the date ON asserted the ’211 patent in the Eastern District of Texas).¹⁸ ON’s contentions are consistent with this date, alleging PI “was aware of the [’211] Patent no later than December 27, 2016.” (B5.) ON sought no testimony from PI’s witnesses about an earlier date for the ’211 patent. Nor does ON dispute that it must prove actual knowledge of the asserted patents to recover damages for overseas

¹⁸ PI is not relying on its interrogatory response as affirmative evidence; rather, it shows the earliest date that ON can establish at trial. Indeed, none of ON’s cited testimony mentions PI’s awareness of Sanyo at all. At this stage, ON must respond with affirmative evidence in its favor or suffer entry of judgment against it. *El v. SEPTA*, 579 F.3d 232, 238 (3d Cir. 2007) (non-movant “must point to actual evidence in the record on which a jury could decide an issue of fact its way”).

sales. Thus, the Court should grant the relief requested by PI, finding “no infringement [of the ’211 patent] with respect to overseas sales of the accused products before December 27, 2016.”

With respect to the other asserted patents, ON’s only response is a late-disclosed theory of prior knowledge based on 30(b)(6) testimony about PI’s general awareness of its competitors’ patents. This testimony is not only speculative, but also far too late. ON’s contentions asserted that PI was aware of the asserted patents “no later than December 27, 2016” (A1649, A1652), with no indication that ON intended to rely on the theory set forth in its opposition.

Last, ON does not dispute PI’s sales data shows that only [REDACTED] of all accused products were sold directly into the U.S. before December 27, 2016. And it does not dispute that its expert could have performed this calculation using PI’s data, but chose to rely on general estimates from a 30(b)(6) witness across PI’s entire portfolio.¹⁹ Thus, the Court should further limit “ON’s royalty base for sales before December 27, 2016 . . . [REDACTED] of PI’s worldwide accused sales.” (D.I. 244.)

MOTION FOR SUMMARY JUDGMENT THAT ON CORP. LACKS STANDING

ON admits that ON Corp. owns no legal rights in the asserted patents. (D.I. 264 at 40; PI UDF #1-2.) The timing of PI’s motion, as well as its “ultimate strategic directive,” are irrelevant. *Pandrol USA, LP v. Airboss Ry. Prods., Inc.*, 320 F.3d 1354, 1367-68 (Fed. Cir. 2003) (a party “can raise the issue of standing for the first time *at any stage of the litigation*, including on appeal”) (emphasis added). With no enforceable rights, ON Corp. should be dismissed as a plaintiff.

CONCLUSION

For the reasons stated above, the Court should grant PI’s motions for summary judgment.

¹⁹ ON “disputes PI’s characterization of the relative share of accused products that are sold into the [U.S.]” (D.I. 264 at 38.) But in the testimony cited by ON, the witness agreed that [REDACTED] of PI’s *total* sales occur in the U.S. (D.I. 265, Ex. 17 at 255:2-22.) Because this estimate was not limited to any product line or time period, it is consistent with PI’s calculation—based on undisputed sales data—that [REDACTED] sales were made in the U.S. before December 27, 2016.

OF COUNSEL:

Douglas E. McCann
Joseph B. Warden
Warren K. Mabey, Jr.
FISH & RICHARDSON P.C.
222 Delaware Ave, 17th Floor
Wilmington, DE 19801
(302) 652-5070

Frank E. Scherkenbach
FISH & RICHARDSON P.C.
One Marina Park Drive
Boston, MA 02210
(617) 521-7883

Michael R. Headley
Howard G. Pollack
Neil A. Warren
FISH & RICHARDSON P.C.
500 Arguello Drive
Redwood City, CA 94063
(650) 839-5007

John W. Thornburgh
FISH & RICHARDSON P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-4312

Sabrina Wilson
FISH & RICHARDSON P.C.
1180 Peachtree Street NE
21st Floor
Atlanta, GA 30309
(404) 879-7209

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/s/ John W. Shaw

John W. Shaw (No. 3362)
Andrew E. Russell (No. 5382)
Jeff Castellano (No. 4837)
SHAW KELLER LLP
I.M. Pei Building
1105 North Market Street, 12th Floor
Wilmington, DE 19801
(302) 298-0700
jshaw@shawkeller.com
arussell@shawkeller.com
jcastellano@shawkeller.com
Attorneys for Defendant

CERTIFICATE OF SERVICE

I, John W. Shaw, hereby certify that on August 29, 2019, this document was served on the persons listed below in the manner indicated:

BY EMAIL

John G. Day
Andrew C. Mayo
ASHBY & GEDDES, P.A.
500 Delaware Avenue, 8th Floor
P.O. Box 1150
Wilmington, DE 19899
(302) 654-1888
jday@ashby-geddes.com
amayo@ashby-geddes.com

Brett J. Thompson
Mark Speegle
Nicholas Schuneman
BAKER BOTTS L.L.P.
98 San Jacinto Blvd., Suite 1500
Austin, TX 78701
(512) 322-2500
brett.thompson@bakerbotts.com
mark.speegle@bakerbotts.com
nick.schuneman@bakerbotts.com

Roger Fulghum
BAKER BOTTS LLP
910 Louisiana
Houston, TX 77002
(713) 229-1707
roger.fulghum@bakerbotts.com

Colette Reiner Mayer
Erik J. Olson
MORRISON & FOERSTER LLP
755 Page Mill Road
Palo Alto, CA 94304
(650) 813-5600
crmayer@mofo.com
ejolson@mofo.com

/s/ John W. Shaw

John W. Shaw (No. 3362)
Andrew E. Russell (No. 5382)
SHAW KELLER LLP
I.M. Pei Building
1105 North Market Street, 12th Floor
Wilmington, DE 19801
(302) 298-0700
jshaw@shawkeller.com
arussell@shawkeller.com
Attorneys for Defendant